# ENVIRONMENTAL REPORT

## CHAPTER 1

## INTRODUCTION

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# 1.0 INTRODUCTION

This report provides information to the Nuclear Regulatory Commission (NRC) to facilitate preparation of an environmental impact statement in accordance with the provisions of 10 CFR 51 Subpart A, National Environmental Policy Act - Regulations Implementing Section 102 (2) (CFR, 2007a) for the preferred location for a new nuclear power plant on the {Bell Bend Nuclear Power Plant (BBNPP)} site in {Luzerne County, Salem Township, Pennsylvania}. This report was prepared in accordance with the guidance provided in NUREG-1555, "Environmental Standard Review Plan" (NRC, 1999) and Regulatory Guide 4.2, Revision 2 (NRC, 1976), "Preparation of Environmental Reports for Nuclear Power Stations."

## 1.1 PROPOSED ACTION

{PPL Bell Bend, LLC} proposes to construct and operate a new nuclear power plant to be designated as {BBNPP} located {west of the existing Susquehanna Steam Electric Station site}. Federal action resulting in the issuance of a combined license (COL) by the Nuclear Regulatory Commission under 10 CFR 52, Early Site Permits; Standard Design Certification; and Combined Licenses for Nuclear Power Plants (CFR, 2007b) is anticipated. The purpose of the proposed new nuclear power plant is to generate electricity {(baseload power)} for sale.

## 1.2 PROJECT DESCRIPTION

### 1.2.1 OWNERSHIP AND APPLICANT

{PPL Bell Bend, LLC is applying for a combined license for the proposed nuclear power plant. The owner of the proposed project is PPL Bell Bend, LLC. The operator of the proposed project is PPL Bell Bend, LLC. The primary contact with the NRC during the licensing process is PPL Bell Bend, LLC.

PPL Bell Bend, LLC is a single purpose limited liability company created for the purpose of owning and operating BBNPP. It is a subsidiary of PPL Bell Bend Holdings, LLC which was created to facilitate the proposed development and financing of the Bell Bend unit. PPL Bell Bend Holdings, LLC is a subsidiary of PPL Nuclear Development, LLC. PPL Nuclear Development, LLC is a subsidiary of PPL Generation, LLC which in turn is a subsidiary of PPL Energy Supply, LLC. PPL Generation LLC owns and controls generating capacity of 11,556 MWe in the United States. PPL Energy Supply, LLC is engaged in the generation of electric power in the U.S. and the delivery of electricity in the U.K. and is a subsidiary of PPL Energy Funding Corporation. PPL Energy Funding Corporation is the parent company for various finance and service companies serving PPL Corporation and certain of its affiliates and is a subsidiary of PPL Corporation. PPL Corporation performs the headquarters function and is the ultimate parent for all PPL's generation assets (fossil, renewable and nuclear), generating operating companies, marketing and trading activities and distribution companies.

PPL Susquehanna, LLC, a subsidiary of PPL Generation, LLC owns a 90% undivided interest in each of the two nuclear generating units at its Susquehanna Steam Electric Station. Allegheny Electric Cooperative, Inc. owns the remaining 10% undivided interest.

The principal office of PPL Bell Bend, LLC is located in Allentown, Pennsylvania. Pennsylvania is the principal place of business.}

### 1.2.2 SITE LOCATION

The proposed new nuclear power plant is located {west of the existing Susquehanna Steam Electric Station site. The BBNPP Owner Controlled Area (OCA) consists of 882 ac (357 ha) in Luzerne County, Pennsylvania, near the west bank of the North Branch of the Susquehanna River, approximately 5 mi (8 km) northeast of Berwick, Pennsylvania. The BBNPP site within the OCA is 424 ac (172 ha). The site is approximately 12 mi (19 km) northwest of Hazelton, Pennsylvania, 19 mi (31 km) southwest of Wilkes-Barre, Pennsylvania, 35 mi (56 km) southwest of Scranton, Pennsylvania and approximately 47 mi (76 km) east, southeast of Williamsport, Pennsylvania.} Figure 1.2-1 and Figure 1.2-2 illustrate the location of the {BBNPP} site.

### 1.2.3 REACTOR INFORMATION

The proposed nuclear power plant consists of {one} pressurized water reactor steam electric system of the AREVA U.S. EPR design. The rated core thermal power will be 4,590 MWt. {The rated and design net electrical output is approximately 1,600 MWe. Submittal of the Design Certification Application for the U.S. EPR was made in December 2007.}

### 1.2.4 COOLING SYSTEM INFORMATION

The two major cooling systems interacting with the environment are the Circulating Water System and the Essential Service Water System. Figure 1.2-3 provides a simplified diagram of these two systems.

#### 1.2.4.1 Circulating Water System

The U.S. EPR uses a Circulating Water System (CWS) to dissipate waste heat rejected from the main condenser and turbine building closed cooling water heat exchangers (via heat exchange with the auxiliary cooling water system) during normal plant operation at full station load. A closed-cycle, wet cooling system is used for {BBNPP. The BBNPP system will use two natural draft cooling towers for heat dissipation. The CWS natural draft cooling towers will have a similar basic structure and profile as the Susquehanna Steam Electric Station Units 1 and 2 cooling towers.} The exhausted steam from the low pressure steam turbine is directed to a surface condenser (i.e., main condenser), where the heat of vaporization is rejected to a closed loop of cooling water. Cooling water from the CWS is also provided to the auxiliary cooling water system. Two 100% capacity auxiliary cooling water system pumps receive cooling water from the CWS and deliver the water to the Closed Cooling Water System (CLCWS) heat exchangers. Heat from the CLCWS System is transferred to the auxiliary cooling water system in the CLCWS System heat exchangers and heated auxiliary cooling water is returned to the CWS. The heated cooling water from the main condenser and auxiliary cooling water system is sent to the spray headers of the cooling tower, where heat content of the cooling water is transferred to the ambient air via evaporative cooling and conduction. After passing through the cooling tower, the cooled water is recirculated back to the main condenser and auxiliary cooling water system to complete the closed cycle cooling water loop. Makeup water from the {Susquehanna River} is required to replace evaporative water losses, drift losses, and blowdown discharge.

{Makeup water for the CWS will be taken from the Susquehanna River by pumps installed in a new intake structure located downriver of the existing Susquehanna Steam Electric Station (SSES) Units 1 and 2 intake structure. The makeup water is pumped through a common header directly to the cooling tower basin. Blowdown from the cooling tower discharges to a common retention basin to provide retention time for settling of suspended solids and to permit further chemical treatment of the wastewater, if required, prior to discharge to the Susquehanna River. The water is pumped through the main condenser, to and from the auxiliary cooling system (all in parallel), and then to the cooling towers to dissipate heat to the atmosphere. Figure 1.2-4 shows the location of the cooling towers for BBNPP}.

#### 1.2.4.2 Essential Service Water System

The U.S. EPR has a safety-related Essential Service Water System (ESWS) to provide cooling water to the Component Cooling Water System (CCWS) heat exchangers located in the Safeguards Building and to the cooling jackets of the emergency diesel generators located in the Emergency Power Generating Buildings. The ESWS is used for normal operations, refueling, shutdown/cooldown, anticipated operational events, design basis accidents and severe accidents. The ESWS is a closed-loop system with four safety-related trains and one non-safety-related dedicated (severe accident) train to dissipate design heat loads. Each safety-related train uses one of the four safety-related two-cell mechanical draft cooling towers to dissipate heat during normal conditions, shutdown/cooldown, or design basis accident conditions. The non-safety-related train uses its associated safety-related train ESWS cooling tower (UHS) to dissipate heat under severe accident conditions. The ESWS water is pumped to the CCWS heat

exchanger and to the emergency diesel generator heat exchanger for the removal of heat. Each of the four ESWS cooling towers has a dedicated CCWS heat exchanger to maintain separation of the safety-related trains. Heated ESWS water returns through piping to the spray distribution header of the {ESWS} cooling tower. Water exits the spray distribution piping through spray nozzles and falls through the tower fill. Two fans provide upward air flow to remove latent and sensible heat from the water droplets as they fall through the tower fill, rejecting heat from the service water to the atmosphere. The heated air will exit the tower and mix with ambient air, completing the heat rejection process. The cooled water is collected in the tower basin for return to the pump suction for recirculation through the system. Each ESWS cooling tower has a dedicated ESWS pump. An additional pump connected to one ESWS train supplies the severe accident train. {The Susquehanna River will provide normal makeup to the ESWS system.}

{Makeup water to the ESWS is normally supplied from the plant raw water system. The plant raw water system is supplied from the Susquehanna River via the CWS. Reject water is directed into the BBNPP CWS blowdown.

Under post-accident conditions lasting longer than 72 hours, makeup water is supplied from the safety-related ESW makeup water system. The ESWEMS makeup pumps are housed in a safety-related intake structure near the ESWEMS retention pond. The pond contains enough water to provide makeup water to the ESWS cooling towers for up to 30 days.}

### 1.2.5 TRANSMISSION SYSTEM INFORMATION

{The property lies within the Pennsylvania, New Jersey and Maryland Regional Transmission Organization, PJM Interconnection, LLC (PJM). The existing 500 kV transmission system consists of the SSES (Susquehanna) 500 kV switchyard which has two 500 kV circuits (Sunbury, Wescosville).

The area transmission map is presented in Figure 1.2-5.

The existing 500 kV transmission system in the vicinity of the BBNPP is planned to be modified in 2012 to add the Susquehanna-Roseland Interconnection approved by PJM. This line is being added independent of and without consideration for the BBNPP project. No additional transmission corridors or other offsite land use would be required to connect the new reactor unit to the existing electrical grid.

The following facilities would be constructed on the BBNPP site:

- One new 500 kV switchyard to transmit power from BBNPP,
- One new 500 kV transmission system switchyard (Susquehanna 500 kV Yard 2),
- Expansion of the existing Susquehanna 500 kV yard, and
- Two new 500 kV, 4,260 MVA circuits on individual towers, connecting the BBNPP switchyard to the existing Susquehanna 500 kV switchyard and the new Susquehanna 500 kV Yard 2.

In the generator interconnection impact study, PJM identified that BBNPP contributes to two previously identified upgrades for overloads initially caused by prior queue position generation additions. Any related offsite modifications to the transmission system are due to prior queue position generation additions.}

### 1.2.6 PROPOSED ACTION AND CONSTRAINTS

The proposed action is to construct and operate a new nuclear power unit on the {BBNPP} site. The NRC 10 CFR 52 (CFR, 2007b) licensing process will be followed to obtain a combined license. At the time of application submittal, there are no constraints on the review process. Numerous other permits and approvals are required from various Federal, State and local agencies as discussed in Section 1.3. These actions will require public meetings and hearings, as required, to obtain the necessary approvals to proceed with construction and operation of the new unit. Constraints may be placed on the proposed action (e.g., limiting groundwater appropriation on site) as the various agency reviews and approvals are processed and issued.

Environmental issues are evaluated using a three-tier standard of significance - SMALL, MODERATE, or LARGE. The definitions of the three significance levels are defined in Footnote 3 of Table B-1 of 10 CFR 51 (CFR, 2007c) as follows:

SMALL: Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.

MODERATE: Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE: Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

### 1.2.7 MAJOR ACTIVITY START AND COMPLETION DATES

The following major activities are scheduled:

1. {Submit Design Certification Application for the U.S. EPR — December 2007
2. Submit Reference Plant (CCNPP Unit 3) COLA — March 2008
3. Submit COL Application for BBNPP — October 2008
4. Construction Completed — December 2017
5. Commercial Operation — December 2018}

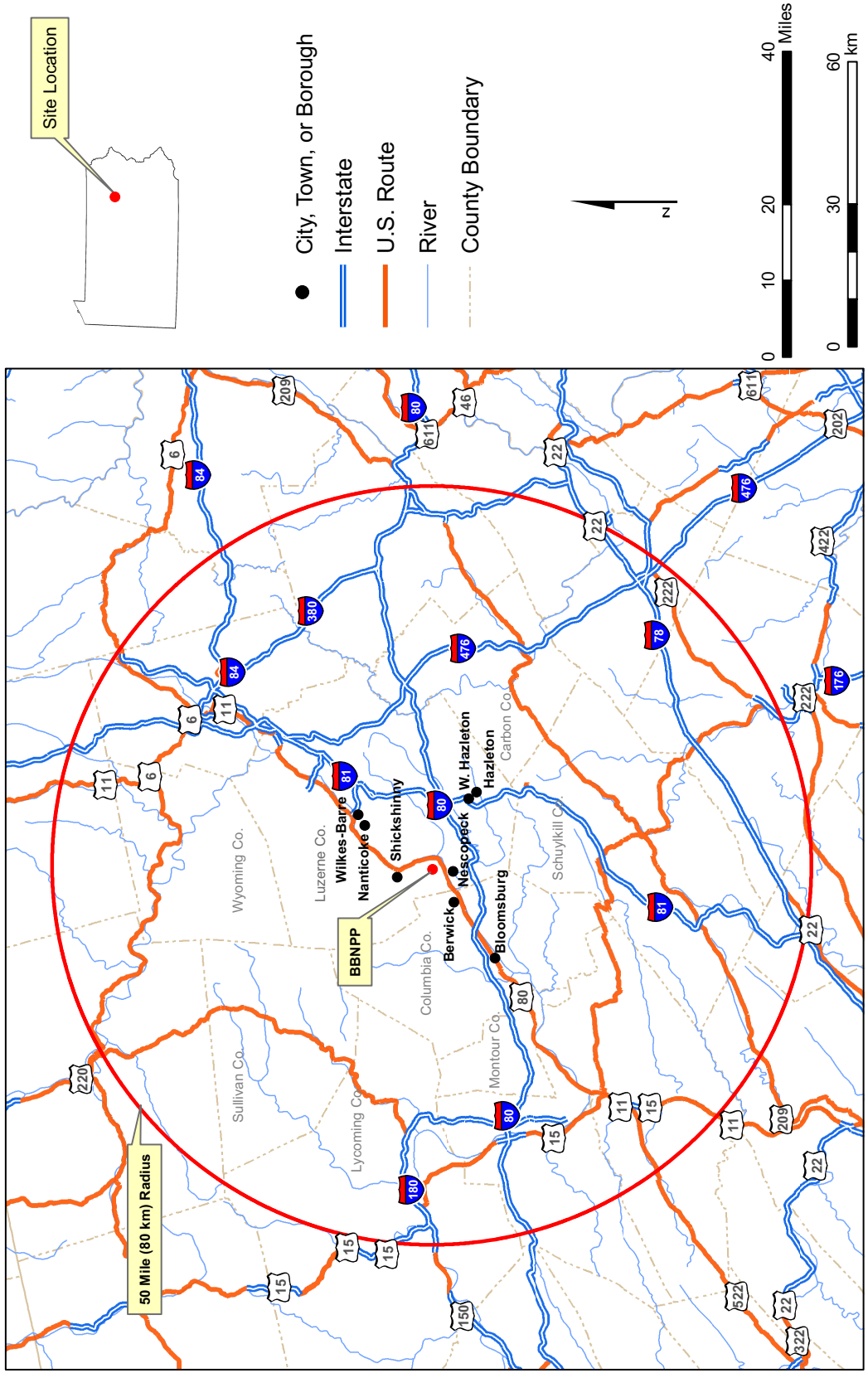



**Figure 1.2-1 {BBNPP Site 50 Mi (80 km) Region}**

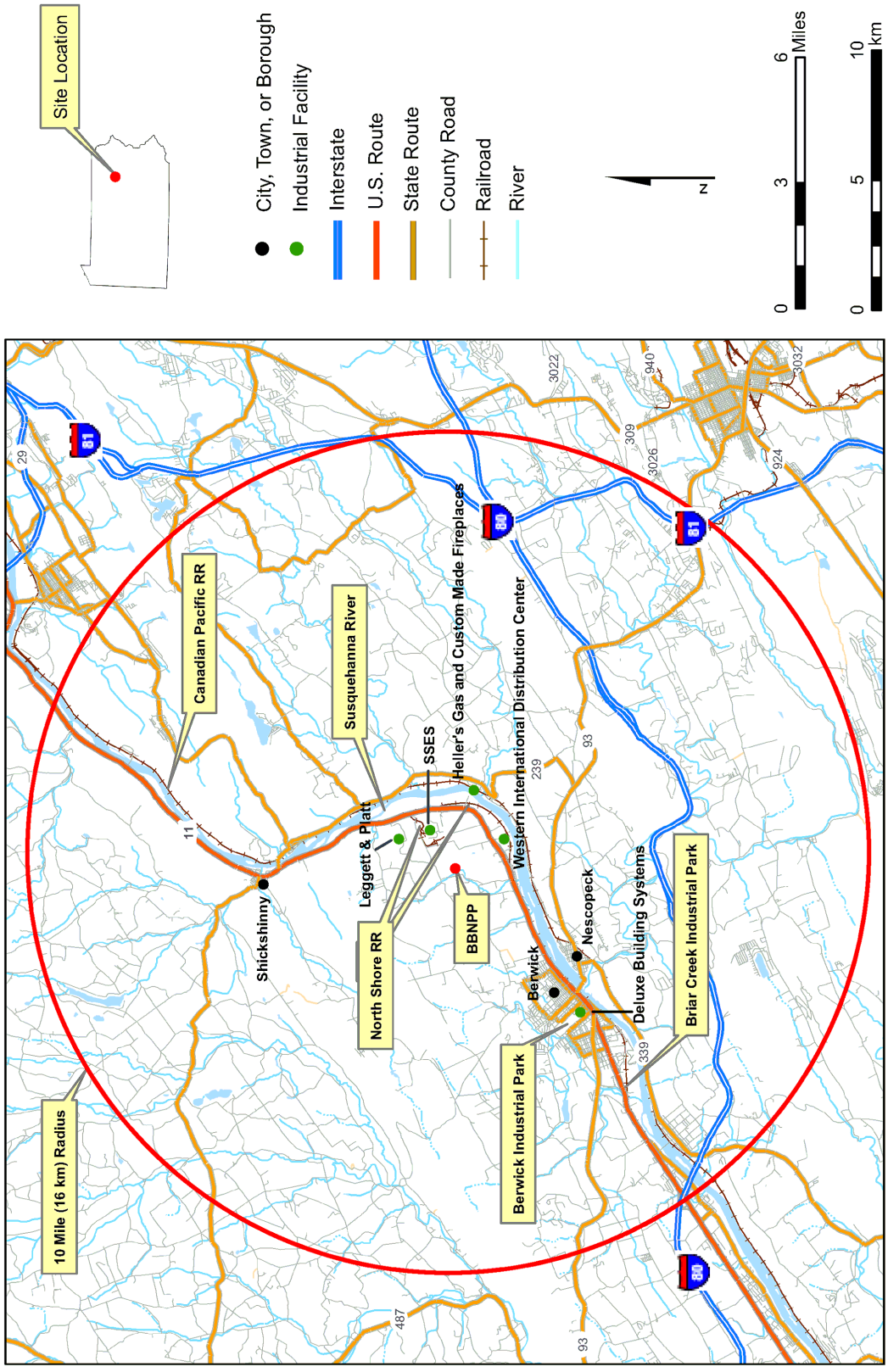



**Figure 1.2-2 {BBNPP Site 10 mi (16 km) Region}**

**Figure 1.2-3 {General Cooling System Flow Diagram for BBNPP}**

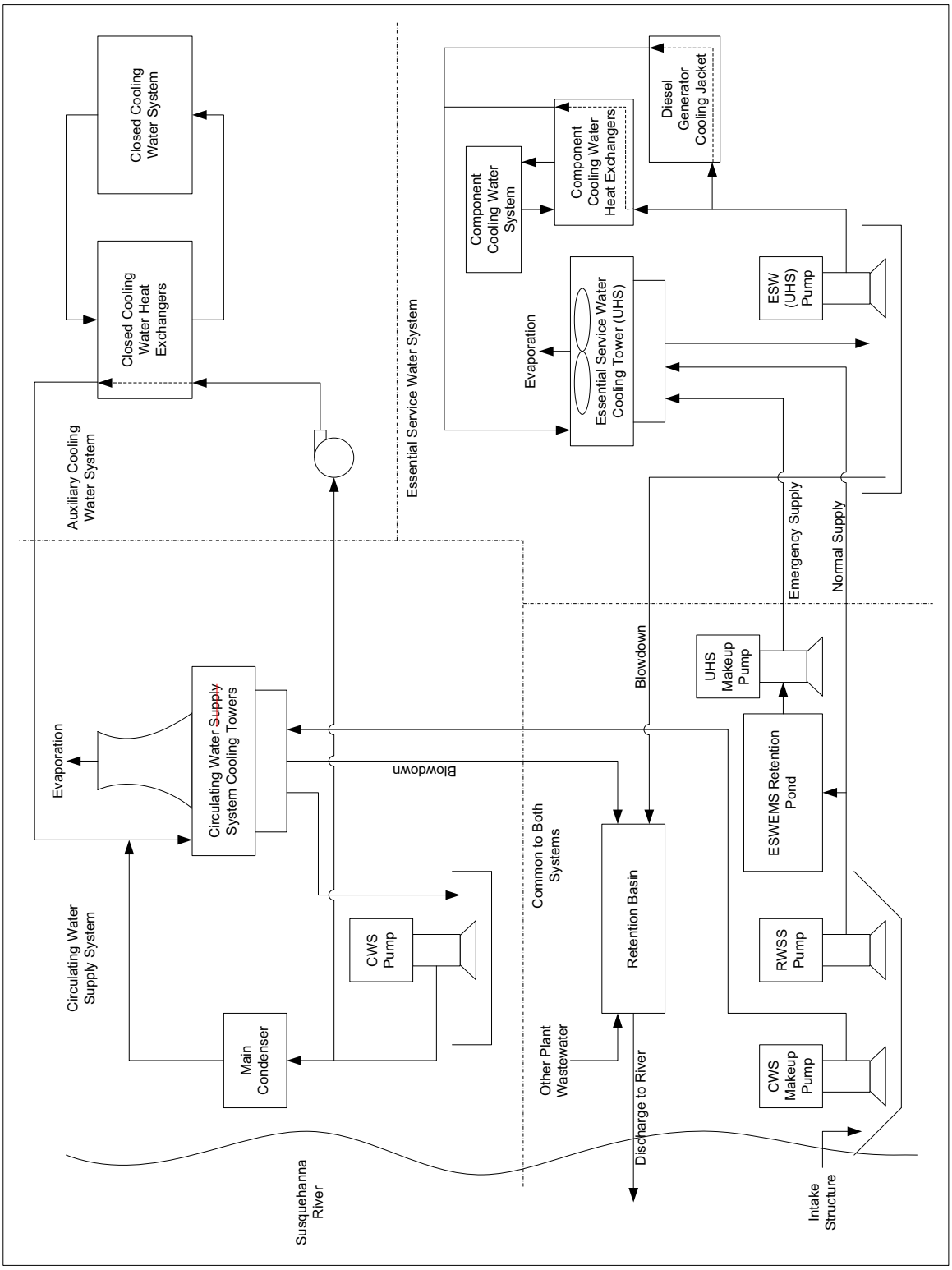
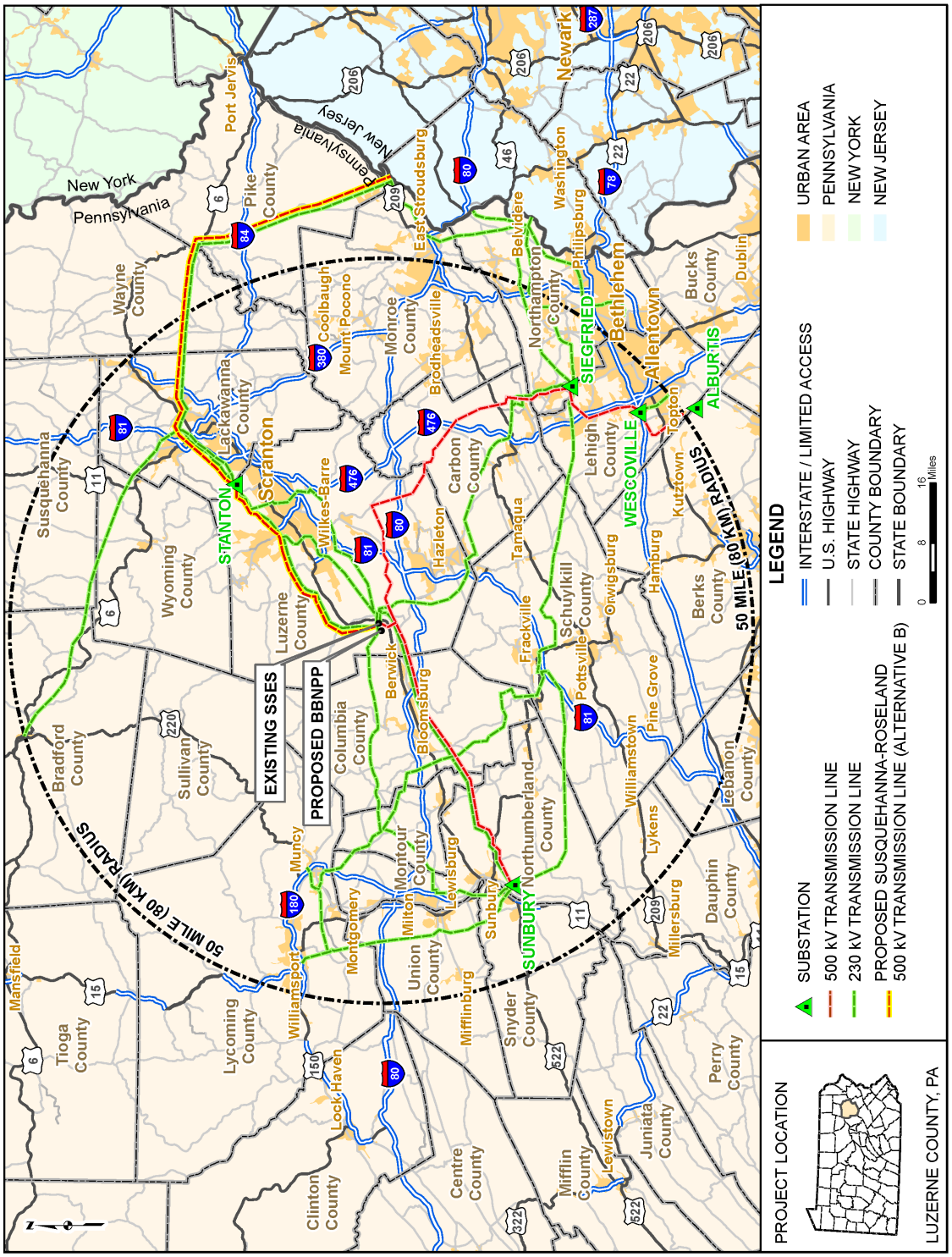


Figure 1.2-4 {Aerial View of SSES Units 1 and 2 with BBNPP Superimposed}

**Figure 1.2-5 {BBNPP Site 500 kV and 230 kV Regional Circuit Corridors}**



## 1.3 STATUS OF REVIEWS, APPROVALS AND CONSULTATIONS

A compilation of environmentally related authorizations required by the proposed project is listed in Table 1.3-1. Also listed in Table 1.3-1 are authorizations that are contingent on project characteristics that have not yet been finalized.

{Some of the authorizations listed in Table 1.3-1 are either explicitly or implicitly required in support of an application and issuance of a various environmental permits by the Pennsylvania Department of Environmental Protection. The Pennsylvania Public Utility Commission (PUC) is an independent Pennsylvania State Agency that regulates the construction of large electric generators that are not merchant plants and high voltage transmission lines as provided by statute and state regulation. BBNPP will be a merchant plant and as such PUC involvement will be limited to the changes needed to tie BBNPP to the high voltage transmission lines.

The Pennsylvania Department of Environmental Protection (PADEP) is responsible for managing the State's comprehensive review of the environmental, engineering, socioeconomic, and planning of this project. This comprehensive review has the goal of balancing the tradeoffs required to provide reliable electrical power while protecting natural resources.}

### 1.3.1 FEDERAL AGENCIES

#### 1.3.1.1 Nuclear Regulatory Commission (NRC)

The Atomic Energy Act of 1954, as amended, gives the NRC regulatory jurisdiction over the design, construction, operation, and decommissioning of {BBNPP} specifically with regard to assurance of public health and safety in 10 CFR 52 and 10 CFR 40 (CFR, 2007b; CFR, 2007d), which are applicable to nuclear power plants. The NRC performs continuous inspection of construction, operation and maintenance activities of the facility. The NRC, in accordance with 10 CFR 51 (CFR, 2007a), also assesses the potential environmental impacts of the proposed plant.

NRC establishes standards for protection against radiation hazards arising out of licensed activities. The NRC licenses are issued pursuant to the Atomic Energy Act of 1954, as amended, and the Energy Organization Act of 1974. The regulations apply to all persons who receive, possess, use or transfer licensed materials.

Domestic Licensing of Source Material (10 CFR 40) (CFR, 2007d) establishes the procedures and criteria for the issuance of licenses to receive, possess, use, transfer, or deliver source material.

General Applicability to Domestic Licensing of Byproduct Material (10 CFR 30) (CFR, 2007e) establishes the procedure and criteria for the issuance of licenses to receive, possess, use, transfer, or deliver byproduct material.

Domestic Licensing of Special Nuclear Material (10 CFR 70) (CFR, 2007f) establishes procedures and criteria for the issuance of licenses to receive title to, own, acquire, deliver, receive, possess, use and transfer special nuclear material (e.g., fuel) and establishes and provides for the terms and conditions upon which the Commission issues such licenses.

#### 1.3.1.2 U.S. Environmental Protection Agency (EPA)

The EPA has primary authority relating to compliance with the Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), and Resource Conservation and Recovery Act (RCRA). {However, the EPA has authorized Pennsylvania to implement nearly all aspects of permitting, monitoring, and reporting activities relating to these statutes and associated programs.} Applicable state requirements, permits, and approvals are described in Section 1.3.2, State Agencies.

Environmental Standards for the Uranium Fuel Cycle (40 CFR 190 Subpart B) (CFR, 2007g) establishes the maximum doses to the body organs resulting from operational normal releases and received by members of the public.

The SDWA provides for protection of public water supply systems and underground sources of drinking water at 40CFR 141-143 (CFR, 2007h). 40 CFR 141.2 defines public water supply systems as systems that provide water for human consumption to at least 25 people or at least 15 connections. Underground sources of drinking water are also protected from contaminated releases and spills by this act. {BBNPP is using a public water supply for its construction water supply and will use a public water supply and the Susquehanna River for its operational water supply; therefore, relevant requirements of the SDWA apply. Also, any groundwater or surface water entering building foundation excavations during construction may be used for dust suppression or other construction uses.}

The Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 350 to 372) (CFR, 2007i) establishes the requirements for Federal, State and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals. The Community Right-to-Know provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases into the environment. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.

The CWA regulates industrial and stormwater point source discharges under the National Pollutant Discharge Elimination System (NPDES) under 40 CFR 122 (CFR, 2007j). The CWA also regulates power plant cooling water intakes and thermal discharges to minimize environmental impacts under Sections 316(b) and (a), respectively. {Construction of BBNPP will require NPDES permits for both construction and operation. These permits will be issued by PADEP and USACE.}

Resource Conservation and Recovery Act (RCRA): RCRA regulates all types of solid wastes, including municipal wastes, industrial wastes, and hazardous waste under 49 CFR 107 to 400 (CFR, 2007k). Non-hazardous wastes are regulated under RCRA Subtitle D. Hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health or the environment. The universe of hazardous wastes is large and diverse. Hazardous wastes can be liquids, solids, contained gases, or sludges. They can be the by-products of manufacturing processes or simply discarded commercial products, like cleaning fluids or pesticides. In regulatory terms, a RCRA hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics: ignitability, corrosivity, reactivity, or toxicity. Hazardous waste is regulated under the Resource Conservation and Recovery Act (RCRA) Subtitle C.

{BBNPP} will generate both non-hazardous and hazardous waste. {PADEP regulates waste management in Pennsylvania.}

#### 1.3.1.3 U.S. Department of Transportation (DOT)

DOT regulates transportation of hazardous materials as follows:

- 49 CFR 107, Hazardous Materials Program Procedures, Subpart G: Registration and Fee to DOT as a Person who Offers or Transports Hazardous Materials (CFR, 2007k).
- 49 CFR 171, General Information, Regulations and Definitions (CFR, 2007l).
- 49 CFR 173, Shippers - General Requirements for Shipments and Packages, Subpart I: Radioactive Materials (CFR, 2007m).
- 49 CFR 178, Specifications for Packagings (CFR, 2007n).

{PPL Bell Bend, LLC} will arrange for transportation of wastes by licensed and registered transporters.

#### 1.3.1.4 The Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.) (USC, 2007a)

The Noise Control Act transfers the responsibility of noise control to State and local governments. Commercial facilities are required to comply with Federal, State, interstate, and local requirements regarding noise control. {Salem Township has a noise control ordinance and quiet hours (SALEM, 2004a). The proposed project will comply with ordinance requirements.}

#### 1.3.1.5 National Historic Preservation Act of 1966 (16 U.S.C. § 470 et seq.) (USC, 2007b)

The National Historic Preservation Act (NHPA) was enacted to protect the nation's cultural resources. The NHPA is supplemented by the Archaeological and Historic Preservation Act. This act directs Federal agencies in recovering and preserving historic and archaeological data that would be lost as the result of construction activities. {In Pennsylvania, the Pennsylvania Historical and Museum Commission and the State Historic Preservation Officer (SHPO) are responsible for carrying out the provisions of the NHPA. Contact with the SHPO has been initiated and a working agreement has been put in place.}

#### 1.3.1.6 Hazardous Materials Transportation Act (49 U.S.C. § 1801 et seq.) (USC, 2007c)

The Hazardous Materials Transportation Act (HMTA) regulates transportation of hazardous material (including radioactive material) in and between States. According to HMTA, States may regulate the transport of hazardous material as long as they are consistent with HMTA or the Department of Transportation (DOT) regulations that are in Title 49 CFR 171-177 (CFR, 2007k). Other regulations regarding packaging for transportation of radionuclides are contained in Title 49 CFR 173 (CFR, 2007m), Subpart I. {BBNPP will arrange for transport of hazardous and radioactive materials from suppliers. BBNPP will also arrange for transport of wastes to disposal facilities in accordance with Title 49 CFR.}

#### 1.3.1.7 U.S. Army Corps of Engineers (USACE)

The Clean Water Act established a permit program under Section 404. Regulations are at 33 CFR 322-323. (CFR, 2007o,p) to be administered by the USACE to regulate the discharge of dredged or fill material into "the waters of the U.S." The USACE also evaluates wetlands, floodplains, dam inspection and dredging of waterways. {The proposed BBNPP will impact non-

tidal wetlands and involve work in navigable waters. Therefore, a Section 404 permit will be required. Contact has been initiated with the USACE.}

#### 1.3.1.8 Occupational Safety and Health Administration (OSHA)

The Occupational Safety and Health Act of 1970 (OSHA) is designed to increase the safety of workers in the workplace. It provides that the {U.S.} Department of Labor is expected to recognize the dangers that may exist in workplaces and establish employee safety and health standards. The identification, classification, and regulations of potential occupational carcinogens are found at 29 CFR 1990 (CFR, 2007q), while the standards pertaining to hazardous materials are listed in 29 CFR 1910 Subpart H (CFR, 2007r). OSHA regulates mitigation requirements and mandates proper training and equipment for workers. {PPL Bell Bend, LLC} employees and management are subject to the requirements of 29 CFR 1910.

#### 1.3.1.9 U.S. Department of Interior (DOI)

The U.S. Fish and Wildlife Services (USFWS) Bureau of DOI is responsible for the protection of threatened and endangered species on land and in fresh waters under the Endangered Species Act (ESA). Consultation is required under Section 7 and regulations are at 50 CFR 402 (CFR, 2007s). {The Bald Eagle (Haliaeetus leucocephalus), Peregrine Falcon (Falco peregrinus) and the Indiana Bat (Myotis sodalis) are federally protected and are present in the general vicinity of the BBNPP site. USFWS is also responsible for protecting migratory birds and/or their eggs or nests under the Migratory Bird Treaty Act. Contact has been initiated with the USFWS.}

#### 1.3.1.10 U.S. Department of Commerce (DOC)

The National Marine Fisheries Service (NMFS) of DOC is responsible for protecting marine mammals and endangered marine life, including anadromous species under the ESA . Consultation is required under Section 7 and regulations are at 50 CFR 402 (CFR, 2007s). In addition to protecting species, NMFS is responsible for protecting essential habitat. {There are no known species in the vicinity of the BBNPP site that are afforded special protection under the ESA.}

#### 1.3.1.11 Federal Aviation Administration (FAA)

The FAA is responsible for safe air navigation and regulates structures greater than 200 ft (60.96 m). {BBNPP} will have structures exceeding this height and notification will be required under 14 CFR 77.13 (CFR, 2007t).

#### 1.3.1.12 {Susquehanna River Basin Commission (SRBC)

The Susquehanna River Basin Commission (CFR, 2008) (PA CODE, 2008s) is the agency that coordinates the water resources of the Susquehanna River basin located in the states of New York, Pennsylvania and Maryland. The Commission is a regional governmental agency whose purpose is to effect comprehensive multiple purpose planning for the conservation, utilization, development, management, and control of the water and related natural resources of the basin. The Susquehanna River Basin Compact provides broad authority for the Commission to carry out basinwide planning programs and projects, and to take independent action as it determines necessary. The SRBC works closely with the PA DEP to minimize duplication of effort. Initial discussions have been held with the SRBC.

The Susquehanna River Basin Commission issues approvals for withdrawing water from the Susquehanna River.}

### 1.3.2 STATE AGENCIES

{The Pennsylvania Public Utility Commission (PUC) has jurisdiction over construction of non-merchant plant electric generating stations and all transmission lines under the Pennsylvania Code (PA CODE) Title 52 Section 57.71 (PA CODE, 2008a). BBNPP will be a merchant plant, therefore, the PUC scope will be limited to construction and modification of transmission lines.

The Pennsylvania Historical and Museum Commission implements the National Historic Preservation Act requirements at 50 CFR 402 (CFR, 2007u) and houses the State Historic Preservation Office (PA, 2008a).

The Pennsylvania Natural Heritage Program is administered by the Pennsylvania Department of Conservation and Natural Resources (PADCNR). The Natural Heritage Program is a partnership between the Western Pennsylvania Conservancy, the PADCNR (PA CODE, 2008b), and in cooperation with the Pennsylvania Fish and Boat Commission (PA CODE, 2008c), the Pennsylvania Game Commission (PA CODE, 2008d), the U.S. Fish and Wildlife Service and the Nature Conservancy.

The Pennsylvania Department of Environmental Protection (PADEP) issues permits for air and water quality, hazardous waste, stormwater discharges and industrial wastewater treatment and discharge as described in the Pennsylvania Code. The PADEP responsibility is to protect and restore the quality of Pennsylvania's air, water, and land resources, while fostering smart growth, economic development, healthy and safe communities, and quality environmental education for the benefit of the environment, public health, and future generations. The PADEP consists of several offices that have responsibility for various permits and environmental programs as described below. The general and specific permits and permit requirements are discussed below by the PADEP administration that has responsibility for reviewing and approving the permitting action. Initial discussions have been held with the PADEP.

Office of Waste, Air and Radiation Management

The Office of Waste, Air and Radiation Management (OWARM) administers three bureaus; the Bureau of Air Quality, the Bureau of Radiation Protection, and the Bureau of Waste Management.

Bureau of Air Quality

The Bureau of Air Quality carries out mandates from the Federal Clean Air Act and administers air pollution monitoring, planning, and control programs in place to improve and maintain air quality. In this role the bureau is responsible for processing permit applications for industries that emit pollutants to the air.

Portions of Pennsylvania have been designated as ozone nonattainment areas, which mean that ozone levels in the ambient air occasionally exceed Federal air quality standards. Therefore, any major new stationary source that will discharge significant amounts of volatile organic compounds (VOCs) or oxides of nitrogen (NOx) must obtain a Non-attainment New Source Review approval prior to construction. For Luzerne County, this approval is required if there is a potential to emit more than 25 tons (22.7 MT) per year of VOCs or NOx. To prevent significant

deterioration of ambient air quality, the Prevention of Significant Deterioration (PSD) approval seeks to limit the amount of air pollutants released by a new or modified facility proposing to locate in an area that meets National Ambient Air Quality Standards (NAAQS). NAAQS have been established for the following air pollutants: particulate matter (PM10), particulate matter (PM2.5), sulfur oxides, carbon monoxide, ozone, nitrogen dioxide and lead.

Air Quality Permits to Construct are required to ensure than any new, modified, replaced or relocated source of air pollution complies with all air quality requirements (PA CODE, 2008e). PSD, if needed, is obtained in conjunction with the Permit to Construct. Air sources with the potential to significantly affect air quality subsequently must obtain an operating permit, which can be a State Permit to Operate (PA CODE, 2008f) or a Clean Air Act Title V Operating Permit (PA CODE, 2008g). Clean Air Act Operating Permits (under Title V) may be required for major sources that have a potential to emit more than 10 lbs (4.5 kg) per hour or 100 tons (91 MT) per year for criteria pollutants, 25 tons per year of NOx or VOCs for Luzerne County, PA. In addition, major sources also include facilities that have the potential to emit greater than 10 tons (9.1 MT) per year of a single Hazardous Air Pollutant, or 25 tons (22.7 MT) per year of any combination of Hazardous Air Pollutants.

BBNPP will have six standby diesel generators (four Emergency Diesel Generators (EDGs), and two Station Blackout (SBO) diesel generators). The auxiliary boilers will use electric heating, and do not contribute directly to air emissions. The CWS cooling tower will emit particulate matter as PM10. Permitting for these operational sources is part of the PA DEP process and emissions will comply with Federal, State, and local emission standards.

Construction phase air emission sources, including the Concrete Batch Plant, will be permitted via the State Permit to Construct and Permit to Operate process and will meet all Federal, State and local emission standards. Measures, such as fugitive dust control, will be employed during construction to minimize emissions.

Generally, mobile sources are not required to obtain an operating permit from OWARM; however, there are provisions for inspection, maintenance and reporting of mobile sources in Pennsylvania (PA CODE, 2008h) (PA CODE, 2008i).

Bureau of Radiation Protection

The Bureau of Radiation Protection administers a radiation control program in conformance with federal law.The bureau regulates radiation sources not regulated by the NRC such as x-ray machines typically used to examine welds under Title 25 of the PA CODE, Chapter 225 (PA CODE, 2008j). BBNPP is expected to have such machines on site. Any sources used by vendors not regulated by the NRC are controlled by OWARM (PA CODE, 2008k).

Bureau of Waste Management

The Bureau of Waste Management implements the following relevant programs in Pennsylvania: solid waste, hazardous waste management, recycling, and oil control. Several permits from the Bureau of Waste Management are required for hazardous waste management and oil control. Solid wastes generated during operation will be collected by a contractor and disposed of at a permitted municipal landfill.

Disposal of land clearing debris during pre-construction will require a Solid Waste Disposal Facility Permit under Title 25 of the PA CODE, Chapters 287 and 288 (PA CODE, 2008l) (PA CODE, 2008m). An oil operations permit will be required for storage of fuel for the Emergency Diesel Generators under Title 25 of the PA CODE, Chapter 245 (PA CODE, 2008n). BBNPP plans to store hazardous waste for less than 90 days before shipment to licensed offsite treatment and disposal facilities. This requires a Hazardous Waste Generator Registration (USEPA Identification Number) which is issued by the Bureau of Waste Management under Title 25 of the PA CODE, Chapter 264a (PA CODE, 2008o). The level of permit and associated monitoring requirements depend on the volume and type of waste generated and whether or not the waste is treated or just stored for offsite disposal. It is anticipated that small to medium volumes of hazardous waste will be stored at the facility for eventual offsite disposal.

PPL Bell Bend, LLC is committed to pollution prevention and waste minimization practices and will incorporate RCRA pollution prevention goals, as identified in 40 CFR 261 (CFR, 2007v). A Pollution Prevention Waste Minimization Plan will be developed to meet the waste minimization criteria of NRC, EPA and state regulations. The Pollution Prevention Waste Minimization Plan will describe how design procedures for operation will minimize (to the extent practicable) the generation of radioactive, mixed, hazardous, and non-hazardous solid waste.

Office of Water Management

The Office of Water Management (OWM) through it's Water Planning Office administers three bureaus: The Bureau of Waterways Engineering, The Bureau of Water Standards and Facility Regulation and The Bureau of Watershed Management.

Bureau of Watershed Management

The Bureau of Watershed Management regulates industrial discharges and stormwater via the National Pollutant Discharge Elimination System (NPDES) program, surface and groundwater appropriations,

NPDES Permits: Construction of BBNPP will involve grubbing, clearing, grading or excavation of 1 or more acres (0.4 or more hectares) of land coverage and must receive a NPDES Construction General Permit (CGP) from PADEP (PA CODE, 2008p). Various land clearing activities; such as offsite borrow pits for fill material are also covered under this general permit. PPL Bell Bend, LLC will develop a Sediment and Erosion Control Plan and Stormwater Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with PADEP prior to the commencement of construction activities (PA CODE, 2008q). Discharges to the Susquehanna River, including cooling tower blowdown, during operation will be regulated under an individual NPDES permit under Title 25 of the PA CODE, Chapter 92 (PA CODE, 2008p).

Water Diversions and Withdrawals: The Bureau of Watershed Management is responsible for reviewing requests for surface water diversions (PA CODE, 2008r). A small creek needs to be diverted around the power block area of the plant. For an electric generating station, water withdrawal authority is obtained from the SRBC for Susquehanna River, surface or groundwater withdrawals and consumptive use in the river basin (PA CODE, 2008s). BBNPP will use the Susquehanna River water for the cooling tower make up and ESWEMS makeup. As a result, a surface water withdrawal approval is required.

Section 401 Certification: Under Section 401 of the federal Clean Water Act, a certificate from the State or a waiver is required for federal permits authorizing activities that may result in discharge into navigable waters (USC, 2007d). A Section 401 Water Quality Certification confirms compliance with the State water quality standards. Activities that require a Section 401 certification include Section 404 permits issued by the USACE (CFR, 2007o). PADEP has a cooperative agreement and joint application process with the USACE relating to Section 404 permits and Section 401 certifications. The proposed BBNPP will require a Section 404 permit and a Section 401 Water Quality Certification.

Wetland Permits: The bureau typically issues permits for work in wetlands and waterways and 100-year floodplains under Title 25 of the PA CODE, Chapters 105 and 106 (PA CODE, 2008r, PA CODE, 2008u), respectively.

Bureau of Waterways Engineering

The Bureau of Waterways Engineering operates the state-level comprehensive flood protection programs. The bureau:

(1) Plans, designs and inspects the construction of DEP dams as well as flood protection and stream improvements projects.

(2) Coordinates planning, design and construction of federal flood control and bank stabilization projects.

(3) Provides technical guidance and assistance for dams and flood-related issues to other DEP bureaus and other state agencies.

(4) Administers and enforces laws and regulations related to dams, including wetlands protection, limited-power permits, licenses to occupy Commonwealth-owned submerged lands, environmental assessments for non-jurisdictional dams in wetlands and exceptional value waters, and water quality certification under Section 401 of the federal Clean Water Act.

Bureau of Water Standards and Facility Regulation

The Bureau of Water Standards and Facility Regulation regulates construction and operation of facilities for potable water and sewage disposal to a municipal sewer. The Bureau of Water Standards issues permits for Major Water Facilities under Title 25 of the PA CODE, Chapter 109 (PA CODE, 2008t).

Water Supply Permits: The BBNPP potable systemwill be connected to a public water supply system and will serve more than 25 for more than six months of the year. Therefore, it is classified as a public water supply system requiring a permit. The PADEP Brief Description well water supply forms are required if water supply wells would be used onsite. BBNPP will use a public sewer system for discharge of sanitary waste.

Sanitary Waste Water System: The bureau also issues a permit for a sanitary waste water system to send waste to a municipal sewer system (PA CODE, 2008z) (PA, 2008c).

State Historic Preservation Office (SHPO)

The Pennsylvania Historical and Museum Commission (PHMC) implements the NHPA in Pennsylvania (CFR, 2007u). The BBNPP site is largely developed farmland and some potential for resources exists. PPL Bell Bend, LLC initiated consultation with the PHMC/SHPO in 2007 and has conducted a Phase 1a and 1b Cultural Resources Survey. Any potential archaeological sites identified based on presence of cultural deposits and any architectural sites also present in the BBNPP project area will be investigated further in the Phase 2 study. Some of these sites may be eligible for listing on the National Register of Historic Places (NRHP). A Phase 2 study to better define the historical and archaeological significance of the resources identified will be developed and, if needed, a mitigation plan will be developed by PPL Bell Bend, LLC to recover any significant information from the affected sites. Section 2.5.3 will provide the results of these surveys.

Luzerne County

The County Engineer will provide input to Salem Township to issue a Road Occupancy Permit (SALEM, 2001a). In addition, a road access permit using Pennsylvania Department of Transportation (PennDOT) regulations, will be issued by PennDOT for construction of the new site access road to the state highway (PA CODE, 2008w). PPL Bell Bend, LLC has consulted with the County Engineer and PennDOT to ensure the Traffic Impact Study and road access plans will meet PennDOT and Salem Township criteria.

Other State Licenses and Registrations

Transport of low level radioactive waste from BBNPP to permitted disposal facilities requires licenses and registrations from the receiving states as well as a transport permit from PennDOT (PA CODE, 2008x). Currently, PPL Bell Bend, LLC anticipates low level radioactive wastes to be shipped to disposal facilities in Tennessee and Utah (TDEC, 2007) (UAC, 2006).

The Pennsylvania Department of Transportation requires a permit approval to erect cranes or structures greater than 200 ft (60.96 m) (PA CODE, 2008aa).

Well Drilling Permits: The PADCNR issues permits for drilling wells (PA CODE, 2008v) to licensed well drillers (PA, 2008b).

The storage of gasoline and other flammable liquids requires a permit from the Pennsylvania Department of Labor and Industry for tanks storing more than 30 gallons (PA CODE, 2008y).}

### 1.3.3 LOCAL AGENCIES

{Plans for construction and operation of the proposed BBNPP are being communicated to and coordinated with local organizations, in particular the Luzerne County Commissioners and the County Engineer. The Salem Township Zoning Ordinance under Section 1302 (SALEM, 2004b) requires site development plans (SALEM, 2001b), erosion and sediment control plans, and related site access plan (SALEM, 2001a) approvals be obtained from Luzerne County, PennDOT and the PADEP prior to Salem Township approval. In addition, permits for demolition and/or relocation of the existing site structures will be accomplished under a permit from Salem Township Building Code (SALEM, 2004c). A permit to tie into the municipal sewer system is also required (SALEM, 2001c) (PA, 2008d). Once these approvals are issued for the project, a

construction permit will be issued by Salem Township to begin site preparation work and construction of roads, offices buildings, and warehouses.}

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| U.S. Nuclear Regulatory Commission (USNRC) | 10 Code of Federal Regulations (CFR) 40 | Source Material License | --(a) | --(a) | Possession, use and transfer of source material | October 2008 |
| USNRC | Atomic Energy Act of 1954 (AEA), 10 CFR 51; 10 CFR 52.89 | Environmental Impact Statement (EIS) and Record of Decision | --(a) | --(a) | Site approval for construction and operation of a nuclear power station as part of an application for a combined license (COL) | October 2008 |
| USNRC | 10 CFR 52, Subpart C | COL | --(a) | --(a) | Combined license for a nuclear power station | October 2008 |
| USNRC | 10 CFR 70 | Special Nuclear Material License | --(a) | --(a) | Possession, delivery, receipt, use, transfer of fuel | October 2008 |
| USNRC | 10 CFR 30 | By-Product Material License | --(a) | --(a) | Production, transfer, receipt, acquisition, ownership, possession of nuclear byproduct materials | October 2008 |
| Federal Aviation Administration (FAA) | 49 United States Code (USC) 44718, 14 CFR 77.13 | Notic of Proposed Construction or Alteration - Construction Cranes | --(a) | --(a) | Construction of an object which has the potential to affect navigable airspace (>200 ft) or within 20,000 ft of an airport | December 2012 |
| FAA | 49 United States Code (USC) 44718, 14 CFR 77.13 | Notic of Proposed Construction or Alteration - Facility | --(a) | --(a) | Construction of an object which has the potential to affect navigable airspace (>200 ft) or within 20,000 ft of an airport | December 2012 |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| US Army Corps of Engineers (USACE) | Federal Water Pollution Act, Sec. 404; 33 CFR 322-323; Rivers and Harbors Act, 33 USC 403, Section 10 316(a) and 316(b) of Clean Water Act | Individual Permit | --(a) | --(a) | Excavation, dredging, and/or disposal of dredged material in navigable waters; filling of waters of U.S. Needed for construction/ modification of the intake and discharge structure, and any filling of waters of U.S. | March 2009 |
| U.S. Environmental Protection Agency (USEPA) | 40 CFR 82.162 | Ozone-Depleting Substance (ODS) Compliance Certification | --(a) | --(a) | Recovery and recycling of ODS | 2010, only if new facility appliances do not contain exempt, non-Class I or II refrigerants |
| USEPA, Pennsylvania Department of Environmental Protection | 40 CFR 112, Subparts A - C, 25 PA Code 245 | Spill Prevention and Countermeasure Control Plan (SPCC) | --(a) | --(a) | Onsite oil storage >1,320 gals (combined), >660 (single), or >42,000 gals (underground) | June 2012 |
| USEPA, Pennsylvania (PA) Department of Labor and Industry | Superfund Amendments and Reauthorization Act of 1986 (SARA) Title 3/ Emergency Planning and Community Right to Know Sections 311-312/ Toxic Chemical Release Inventory Section 313 | Chemicals subject to Reporting Requirements | --(a) | --(a) | Use and storage of hazardous chemicals on site. | June 2012 for first report; annually thereafter |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| USEPA | 40 CFR 262.12 | Hazardous Waste Generator Registration (USEPA Identification Number) | --(a) | --(a) | Generation and storage of hazardous waste for <90 days | March 2009 |
| US Department of Transportation | 49 CFR 107, Subpart G | Certificate of Registration | --(a) | --(a) | Transportation of hazardous materials | April 2011 |
| U.S. Fish and Wildlife Services (USFWS) | Endangered Species Act (ESA), Section 7 (16 USC 35); 50 CFR 402 | Consultation regarding potential to adversely impact protected species (non-marine species) and critical habitats | --(a) | --(a) | Identification of protected species and critical habitats onsite and in the vicinity, assessment of project construction and/or operation impacts, and concurrence on appropriate mitigation. | Ongoing |
| USFWS | Migratory Bird Treaty Act, 50 CFR 21 | Migratory Bird Permit | --(a) | --(a) | Adverse impacts on protected species and/or their eggs or nests due to site operations | December 2012 |
| National Marine Fisheries Service (NMFS) | ESA, Section 7 (16 USC 35); 50 CFR 402; Magnuson-Stevens Fishery Conservation Management Act, Section 305(b) (2)-(4) | Consultation regarding potential to adversely impact protected species (marine species) and critical habitats; Consultation regarding potential impacts to Essential Fish Habitat (EFH) | --(a) | --(a) | Identification of protected species and critical habitats and EFH onsite and in the vicinity, assessment of project construction and/or operation impacts, and concurrence on appropriate mitigation. | September 2009 |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| State Historic Preservation Office (SHPO)/ PA Historical and Museum Commission | National Historic Preservation Act (NHPA) Section 106; 36 CFR 800 | Cultural Resources Review and Consultation | --(a) | --(a) | Identification, description, and evaluation of cultural resources on and in the site vicinity with the potential to be impacted by plant construction and/or operations. Concurrence on appropriate mitigation. | Ongoing |
| PA Public Utility Commission | 25 PA Code Section 57.71 | Permit for modifications to transmission lines | --(a) | --(a) | Construction or modification of transmission lines (Lines to be modified) | March 2009 |
| Susquehanna River Basin Commission (SRBC) | 18 CFR Parts 803-808 Article 3 Section 310; 25 PA Code Chapter 105 | Water Withdrawal and Consumptive Use Approvals | --(a) | --(a) | Water withdrawal > 100,000 gpd or consumptive use >20,000 gpd. Covers groundwater withdrawal as well as withdrawal from the Susquehanna River. | March 2009 |
| PA Fish and Boat Commission | Section 2305 of the Fish and Boat Code | PA Threatened and Endangered Species Project Natural Diversity Index (PNDI) search; | --(a) | --(a) | Potential impact on State endangered, threatened and candidate aquatic species onsite and in the vicinity, assessment of project construction and/or operation impacts, and concurrence on appropriate mitigation | Ongoing |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| PA Department of Conservation and Natural Resources (PA DCNR) | 17 PA Code Chapter 45 | PA Threatened and Endangered Species; Project Natural Diversity Index (PNDI) search | --(a) | --(a) | Potential impact on State plants that are rare, threatened or endangered onsite and in the vicinity, assessment of project construction and/or operation impacts, and concurrence on appropriate mitigation | Ongoing |
| PA Game Commission | 58 PA Code Chapter 133 | PA Threatened and Endangered Species; Project Natural Diversity Index (PNDI) search | --(a) | --(a) | Potential impact on State wildlife species that are rare, threatened or endangered onsite and in the vicinity, assessment of project construction and/or operation impacts, and concurrence on appropriate mitigation | Ongoing |
| PA DCNR | PA Act 610, PA Water Well Drillers License Act of 1956; 17 PA Code Chapter 47 | Water Well Drillers License and Rig Permit | --(a) | --(a) | Licensing of drillers and drilling rigs. Permit for the installation of groundwater monitoring wells | Ongoing |
| PA Department of Environmental Protection (PADEP) | Federal Water Pollution Control Act, 33 USC 1251 et seq.,; 25 PA Code Chapter 93 | Section 401 Water Quality Certification | --(a) | --(a) | Compliance with state water quality standards | No separate application, combined with review for Section 402 (NPDES) or 404 (Dredging) permits |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| PADEP | Federal Water Pollution Control Act, Section 402; 33 USC 1251 et seq.; Section 316(a) of Clean Water Act; 25 PA Code Chapter 92 | National Pollution Discharge Elimination System (NPDES) Permit | --(a) | --(a) | Discharge of industrial wastewater and stormwater during operation to surface water | December 2013 |
| PA DEP/ Luzerne County | 25 PA Code Chapters 92, 93 and 102 | General NPDES Permit for Stormwater associated with Construction Activity and Post-Construction Erosion and Sediment Management | --(a) | --(a) | Discharge of stormwater during construction, erosion and sediment control during construction and post-construction, and post-construction stormwater management | September 2009 |
| PA DEP/Luzerne County | 25 PA Code Section 287, 291 | Residual Waste General Permit | --(a) | --(a) | Onsite disposal of land-clearing and construction debris | September 2010 |
| PADEP | 25 PA Code Section 105 | General Permit 4 - Intake and Outfall Structures | --(a) | --(a) | Design and impact of inflow and outfall structures | September 2009 |
| PADEP | 25 PA Code Chapters 105 - 106 | Waterway and 100-Year Floodplain Permits; General Permit - 3 | --(a) | --(a) | Any activity that changes the course, current, or cross-section of a non-tidal stream or body of water, including the 100-year floodplain | March 2009 |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| PADEP | 25 PA Code Chapter 95; PA Act 394, PA Clean Streams Law, Section 207, Approval of Sewer Plans, Designs and Relevant Data | NPDES Permit to Discharge Industrial Wastewater | --(a) | --(a) | Discharge from a Sanitary Waste Water System to a municipal sewer | March 2009 |
| PADEP | 25 PA Code Chapter 92 | Stormwater Management Plan | --(a) | --(a) | Land development activity (construction and operation) | March 2009 |
| PADEP | 25 PA Code Section 105.15 | Environmental impact assessment to wetlands, fisheries, parks, cultural and historical resources, state game lands, water quality and recreation | --(a) | --(a) | Construction and Operation of Plant and Structures in Wetlands and Waterways | September 2009 |
| PADEP | 25 PA Code Sction 105.17 | PA Wetlands Permit; General Permit - 3 | --(a) | --(a) | Construction work in wetlands | March 2009 |
| PADEP | 25 PA Code Chapters 93 and 105; Section 316(b) of Clean Water Act | Water Diversion Permit | --(a) | --(a) | Withdrawal of surface water during operation; operation of new reservoir that would support facility | March 2009 |
| PADEP | 25 PA Code 217 | State Radioactive Materials License | --(a) | --(a) | Possession, use, acquisition, ownership, transfer of radioactive materials not regulated by NRC | 2015 |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| PADEP | 25 PA Code Section 245 | Storage Tank Registration and Permitting | --(a) | --(a) | Storage of oil in above ground storage tanks >21,000 gal combined of petroleum or hazardous substances and/or >1,000 gal of used oil; storing a regulated substance in underground tanks >250 gals | 2015 |
| PADEP | 25 PA Code Section 264a | Registration for Storage of Hazardous or Mixed Waste | --(a) | --(a) | Generation and storage of hazardous waste | 2015 |
| PADEP | 40 CFR 70; 25 PA Code Chapter 127 | State Air Permit to Construct - Construction Phase | --(a) | --(a) | Construction of construction phase air pollutant emission sources | September 2010 |
| PADEP | 40 CFR 52.21; 25 PA Code Chapter 122 | Prevention of Significant Deterioration (PSD) - Construction Phase | --(a) | --(a) | Construction and operation of construction-phase major stationary sources of attainment pollutants. | September 2010 |
| PADEP | 25 PA Code Chapter 122 | New Source Review (NSR) - Construction Phase | --(a) | --(a) | Construction of construction-phase major stationary sources of non-attainment pollutants. | March 2009 |
| PADEP | 40 CFR 70; 25 PA Code Chapter 127 | State Air Permit to Operate | --(a) | --(a) | Operation of construction phase air pollutant emission sources | State issues permit after start-up period as defined in permit to construct |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| PADEP | 40 CFR 70;<br>25 PA Code Chapter 127 | State Air Permit to Construct - Operational Phase | --(a) | --(a) | Construction of operational phase air pollutant emission sources | September 2010 |
| PADEP | 40 CFR 52.21;<br>25 PA Code Chapter 122 | Prevention of Significant Deterioration (PSD) - Operational Phase) | --(a) | --(a) | Construction of major stationary sources of attainment pollutants for operational phase facilities. | September 2010 |
| PADEP | 25 PA Code Chapter 122 | New Source Review (NSR) - Operational Phase) | --(a) | --(a) | Construction of major stationary sources of attainment pollutants for operational phase facilities. | March 2009 |
| PADEP | 40 CFR 70;<br>25 PA Chapter 127 | Title V Operating Permit | --(a) | --(a) | Operation of facility with major stationary sources of air emissions | 2016 |
| PA Department of Labor | 37 PA Code Section 11 | Storage Tank Registration and Permitting | --(a) | --(a) | Storage of flammable liquids in above ground storage tanks >30 gal l | 2015 |
| Pennsylvania Department of Transportation (Penn DOT) | 49 CFR 171-180;<br>67 PA Code Chapter 403 | Transport Permit for Hazardous Waste | --(a) | --(a) | Shipment of low level radwaste or hazardous waste | 2016 |
| Penn DOT | 67 PA Code Chapter 441 | Permit for Access to Highways | --(a) | --(a) | Access to and occupancy of highways by driveways and local roads | January 2009 |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| Penn DOT | Aviation Code, Act of October 10, 1984, PL 837 No. 164, 67 PA Code 479.4 | Notice of Proposed Construction or Alteration - Construction Cranes | --(a) | --(a) | Construction of an object which has the potential to affect navigable airspace (>200 ft) or within 20,000 ft of an airport | December 2012 |
| Penn DOT | Aviation Code, Act of October 10, 1984, PL 837 No. 164, 67 PA Code 479.4 | Notice of Proposed Construction or Alteration - Facility | --(a) | --(a) | Construction of an object which has the potential to affect navigable airspace (>200 ft) or within 20,000 ft of an airport | December 2012 |
| Luzerne County / PADEP | 25 PA Code Chapter 102 | Erosion and Sediment Control Plan Approval | --(a) | --(a) | Land clearing, grading, or other earth disturbance (construction) | January 2009 |
| Luzerne County Emergency Planning Commission | SARA Title III; 10 CFR 50.47 | County Emergency Planning Committee | --(a) | --(a) | Need Letter of Agreement for nuclear emergency plan. Also need to meet SARA Title III requirements | September 2008 |
| Columbia County Emergency Planning Commission | 10 CFR 50.47 | County Emergency Planning Committee | --(a) | --(a) | Need Letter of Agreement for nuclear emergency plan. | September 2008 |
| Salem Township | 10 CFR 50.47 | Local Emergency Planning Committee | --(a) | --(a) | Need Letter of Agreement for nuclear emergency plan. | September 2008 |
| Salem Township | Zoning Ordinance Section 318 | Noise Standard | --(a) | --(a) | Noise control during construction and operation | N/A |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| Salem Township | Zoning Ordinance Section 1302 | Zoning Permit | --(a) | --(a) | Need to rezone property for heavy industrial use | January 2009 |
| Salem Township/ Luzerne County/ PADEP | Subdivision and Land Development Ordinance Section 501 | Approval for Site Development Plan | --(a) | --(a) | Construction of buildings and other structures | January 2009 |
| Salem Township/ Luzerne County/ PennDOT | Subdivision and Land Development Ordinance Section 800 | Highway Occupancy Permit for Construction Entrances and Temporary Roads | --(a) | --(a) | Need to obtain a permit to establish construction entrances from local roads and to establish temporary roads during construction | January 2009 |
| Salem Township | Zoning Ordinance Section 202 and 1303 | Permit for Structure Demolition or Move | --(a) | --(a) | Demolish certain structures or move certain structures | January 2009 |
| Salem Township | Subdivision Land and Development Ordinance; PA Act 537, Sewage Facilities of 1966 | Sewer Permit | --(a) | --(a) | Need to tie into Munincipal Sewer System | January 2009 |
| Salem Township | Zoning Ordinance Section 1303 | Construction Permit | --(a) | --(a) | Permit to construct buildings and structures not within the scope of the NRC | January 2009 |
| Salem Township | Zoning Ordinance Section 1303 | Use and Occupancy Permit | --(a) | --(a) | Use and occupancy of buildings | Certificate of Occupancy issued as defined by Building Permit |

## Table 1.3-1 Federal, State and Local Authorizations



| Agency | Authority | Requirement | License/ Permit No. | Expiration Date | Activity Covered | Anticipated Application Submittal Date |
|---|---|---|---|---|---|---|
| Tennessee Department of Environment and Conservation - Division of Radiological Health | TN Department of Environment and Conservation, Rule 1200-2-10.32 | Tennessee Radioactive License-for Delivery | --(a) | --(a) | Transportation of radioactive waste into the State of Tennessee (below regulatory limits material) | 2015 |
| State of Utah Department of Environmental Quality - Division of Radiological Control | Utah Department of Environmental Quality, Radiation Control Rules R313 26 | General Site Access Permit | --(a) | --(a) | Transportation of radioactive waste into the State of Utah | 2015 |

Notes:
(a) Data not available. Application for permits will be made before the beginning of construction, as required.

## 1.4 REFERENCES

**{CFR, 2007a.** Title 10, Code of Federal Regulations, Part 51, Environmental Protection Regulations For Domestic Licensing And Related Regulatory Functions, 2007.

**CFR, 2007b.** Title 10, Code of Federal Regulations, Part 52, Early Site Permits; Standard Design Certifications; And Combined Licenses For Nuclear Power Plants, 2007.

**CFR, 2007c.** Title 10, Code of Federal Regulations, Part 51, Environmental Protection Regulations for Domestic Licensing of Nuclear Power Plants, Table B-1, Summary of Findings of NEPA Issues for License Renewal of Nuclear Power Plants, 2007.

**CFR, 2007d.** Title 10, Code of Federal Regulations, Part 40, Domestic Licensing of Source Material, 2007.

**CFR, 2007e.** Title 10, Code of Federal Regulations, Part 30, Rules of General Applicability to Domestic Licensing of Byproduct Material, 2007.

**CFR, 2007f.** Title 10, Code of Federal Regulations, Part 70, Domestic Licensing of Special Nuclear Material, 2007.

**CFR, 2007g**. Title 40, Code of Federal Regulations, Part 190, Environmental Radiation Protection Standards for Nuclear Power Operations, 2007.

**CFR, 2007h**. Title 40, Code of Federal Regulations, Parts 141-143, National Primary and Secondary Drinking Water Regulations, 2007.

**CFR, 2007i.** Title 40, Code of Federal Regulations, The Emergency Planning and Community Right-to-Know Act of 1986, Parts 350 to 372, 2007.

**CFR, 2007j.** Title 40, Code of Federal Regulations, Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System, 2007.

**CFR, 2007k**. Title 49, Code of Federal Regulations, Part 107 through Part 400 Hazardous Materials Sections, 2007.

**CFR, 2007l**. Title 49, Code of Federal Regulations, Part 171, General Information, Regulations and Definitions, 2007.

**CFR, 2007m**. Title 49, Code of Federal Regulations, Part 173, Shippers – General Requirements for Shipments and Packagings, 2007.

**CFR, 2007n**. Title 49, Code of Federal Regulations, Part 177-179, Specifications for Tank Cars, 2007.

**CFR, 2007o.** Title 33, Code of Federal Regulations, Part 322, Permits for Structures or Work in or Affecting Navigable Waters of the United States, 2007.

**CFR, 2007p**. Title 33, Code of Federal Regulations, Part 322, Permits for Discharges of Dredged or Fill Material into Waters of the United States, 2007.

**CFR, 2007q**. Title 29, Code of Federal Regulations, Part 1990, Identification, Classification and Regulation of Carcinogens, 2007.

**CFR, 2007r**. Title 29, Code of Federal Regulations, Part 1910, Subpart H, Occupational Safety and Health Standards, 2007.

**CFR, 2007s**. Title 50, Code of Federal Regulations, Part 402, Interagency Cooperation – Endangered Species Act of 1973, as amended.

**CFR, 2007t**. Title 14, Code of Federal Regulations, Part 77.13, Construction of Alteration Requiring Notice, 2007.

**CFR, 2007u.** Title 36, Code of Federal Regulations, Part 800, Protection of Historic Properties, 2007.

**CFR, 2007v**. Title 40, Code of Federal Regulations, Part 261, Identification and Listing of Hazardous Waste, 2007.

**CFR, 2008.** Title 18, Code of Federal Regulations, Part 803, Susquehanna River Basin Commission, 2008.

**NRC, 1976.** Preparation of Environmental Reports for Nuclear Power Stations, Regulatory Guide 4.2, Revision 2, Nuclear Regulatory Commission, July 1976.

**NRC, 1999**. Environmental Standard Review Plan, NUREG-1555, Nuclear Regulatory Commission, October 1999.

**PA, 2008a**. Pennsylvania Public Act 167, Historic District Act, June 13, 1961.

**PA, 2008b**. Pennsylvania Public Act 610, Water Well Drillers License, 1956.

**PA, 2008c.** Pennsylvania Public Act 394, The Clean Streams Law, 1987.

**PA, 2008d.** Pennsylvannia Public Act 537, Sewage Facilities, 1966.

**PA CODE, 2008a**. Title 52, Pennsylvania Code, Section 57.71, Electric Service - Commission Review of Siting and Construction of Electric Transmission Lines, 2008.

**PA CODE, 2008b**. Title 17, Pennsylvania Code, Chapter 45, Conservation of Pennsylvania Native Wild Plants, 2008.

**PA CODE, 2008c**. Title 58, Pennsylvania Code, Chapter 75, Endangered Species, 2008.

**PA CODE, 2008d**. Title 58, Pennsylvania Code, Chapter 133, Wildlife Classification, 2008.

**PA CODE, 2008e**. Title 25, Pennsylvania Code, Chapter 225, National Standards of Performance for New Stationary Sources, 2008.

**PA CODE, 2008f**. Title 25, Pennsylvania Code, Chapter 127, Construction, Modification, Reactivation and Operation of Sources, 2008.

**PA CODE, 2008g**. Title 25, Pennsylvania Code, Section 127.501, Title V Operating Permit, 2008.

**PA CODE, 2008h**. Title 25, Pennsylvania Code, Chapter 139, Sampling and Testing, 2008.

**PA CODE, 2008i**. Title 25, Pennsylvania Code, Chapter 135, Reporting of Sources, 2008.

**PA CODE, 2008j**. Title 25, Pennsylvania Code, Chapter 225, Radiation Safety Requirements for Industrial Radiographic Operations, 2008.

**PA CODE, 2008k**. Title 25, Pennsylvania Code, Chapter 217, Licensing of Radioactive Material, 2008.

**PA CODE, 2008l**. Title 25, Pennsylvania Code, Chapter 287, Residual Waste Management - General Provisions, 2008.

**PA CODE, 2008m**. Title 25, Pennsylvania Code, Chapter 288, Residual Waste Landfills, 2008.

**PA CODE, 2008n**. Title 25, Pennsylvania Code, Chapter 245, Administration of the Storage Tank and Spill Prevention Program, 2008.

**PA CODE, 2008o**. Title 25, Pennsylvania Code, Chapter 264a, Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, 2008.

**PA CODE, 2008p**. Title 25, Pennsylvania Code, Chapter 92, NPDES Permitting, Monitoring and Compliance, 2008.

**PA CODE, 2008q**. Title 25, Pennsylvania Code, Chapter 102, Erosion and Sediment Control, 2008.

**PA CODE, 2008r**. Title 25, Pennsylvania Code, Chapter 105, Dam Safety and Waterway Management, 2008.

**PA CODE, 2008s**. Title 25, Pennsylvania Code, Chapter 806, Susquehanna River Basin Commission - Review and Approval of Projects, 2008.

**PA CODE, 2008t**. Title 25, Pennsylvania Code, Chapter 109, Safe Drinking Water, 2008.

**PA CODE, 2008u**. Title 25, Pennsylvania Code, Chapter 106, Floodplain Management, 2008.

**PA CODE, 2008v**. Title 17, Pennsylvania Code, Chapter 47, Drilling Water Wells, 2008.

**PA CODE, 2008w**. Title 67, Pennsylvania Code, Chapter 441, Access to and Occupancy of Highways by Driveways and Local Roads, 2008.

**PA CODE, 2008x**. Title 67, Pennsylvania Code, Chapter 403, Hazardous Material Transportation, 2008.

**PA CODE, 2008y**. Title 37, Pennsylvania Code, Chapter 11, Flammable and Combustible Liquids, 2008.

**PA CODE, 2008z.** Title 25, Pennsylvania Code, Chapter 95, Wastewater Treatment Requirements, 2008.

**PA CODE, 2008aa.** Title 25, Pennsylvania Code, Chapter 67, Section 479.4, Airport Obstructions, 2008.

**SALEM, 2001a**. Salem Township Subdivision and Land Development Ordinance, Section 800, Application, 2001.

**SALEM, 2001b**. Salem Township Subdivision and Land Development Ordinance, Section 501, Submission and Review Procedure, 2001.

**SALEM, 2004a**. Salem Township Zoning Ordinance, Section 318, Performance Standards - Noise, 2004.

**SALEM, 2004b**. Salem Township Zoning Ordinance, Section 1302, Zoning Permit, 2004.

**SALEM, 2004c**. Salem Township Zoning Ordinance, Section 1303, Certificate of Zoning Compliance, 2004.

**TDEC, 2007.** Tennessee Department of Environment and Conservation, Chapter 1200-2-10, Licensing and Regulation, 2007.

**UAC, 2006.** Utah Administrative Code, Rule 313-26, Generator Site Access Permit Requirements for Accessing Utah Radioactive Waste Disposal Facilities, 2006.

**USC, 2007a.** The Public Health and Welfare, Noise Control, 42 USC 4901, Public Law 92-574, 2007.

**USC, 2007b**. National Historic Preservation Act of 1966 as Amended Through 1992, 16 USC 470, Public Law, 102-575, 2007.

**USC, 2007c.** Hazardous Material Transportation Act as Amended by the Hazardous Material Transportation Uniform Safety Act of 1990, 49 USC 1801, Public Law 101-615, 2007.

**USC, 2007d.** Federal Water Pollution Control Act 33 USC 12S1 et seq. Title IV, 2007.}